

CLAIMS

1. A system for delivering content over a data network, comprising
a data storage device for storing content to be delivered over the data network,
a server process capable of monitoring the data network for responding to a
request to serve selected content over the data network, and
a file system capable of communicating with the server process and capable of
processing the request to identify meta-data associated with the selected content and
being representative of a level of service to be provided the selected content.
2. A system according to claim 1, further including a service level manager capable of
determining, as a function of the meta-data, whether the selected content may be serviced
in compliance with the associated level of service.
3. A system according to claim 1, wherein the server process includes a process for directing
the request to the service level manager.
4. A system according to claim 3, wherein the service level manager includes a request
analyzer process for analyzing the request to identify information associated with a level
of service to provide the request.
5. A process according to claim 3, wherein the request analyzer process includes means for
identifying information selected from the group consisting of user identification, user ISP
identification, transmission throughput, client, and CDN server identification

6. A system according to claim 3, wherein the service level manager includes a process for directing the server process to employ a selected file open process for requesting the file system to access data associated with the selected content.
7. A system according to claim 1, wherein the server process includes a file open process that includes a plurality of file open methods for indicating to the file system information representative of the level of service to provide the request.
8. A system according to claim 1, wherein the file system includes a process for associating with a file open request information representative of a level of service to provide to content associated with that request.
9. A system according to claim 1, further including a service level manager disposed at the front end of the server process for processing the request to associate with the request a level of service to provide.
10. A system according to claim 9, wherein the service level manager includes a process for embedding into a pathname service level information to be associated with the selected content.
11. A system according to claim 10 wherein the embedding process embeds service level information into a URL.pathname.
12. A system according to claim 1, wherein the file system includes parsing means for parsing a pathname associated with the selected content to identify a level of service to provide to the requested content.

13. A system according to claim 1, wherein the file system includes a process for associating the selected content with one of a plurality of different service levels.
14. A system according to claim 1, further including a scheduling process for generating a schedule for servicing the requested content.
15. A system according to claim 14, further including an admission process, responsive to the scheduling process, for employing the schedule to determine whether the request for selected content can be accommodated at the level of service associated with the request.
16. A system according to claim 14, wherein the scheduling process determines a deadline parameter representative of a time constraint for processing the request
17. A system according to claim 16, wherein the scheduling process determines the deadline parameter as a function of a target bit-rate for serving the selected content.
18. A system according to claim 16, wherein the scheduling process includes a process for employing the deadline parameter to generate the schedule for servicing the request.
19. A system according to claim 1, further including a slack-time process for arbitrating between scheduling requirements of content having different priorities of service levels.
20. A system according to claim 1, further including a control process for managing a system resource for controlling a rate at which services are provided.
21. A system according to claim 20 wherein the control process manages a system resource selected from the group consisting of data storage, system memory, processor resources,

and network throughput.

22. A method for serving streams of content at selected levels of service, comprising
listening on a data network for a request for a stream of selected content,
executing a process capable of identifying a file associated with the selected
content and capable of identifying meta-data associated with the file and having
information representative of one of a plurality of levels of service to provide a stream of
the selected content, and
controlling access by a streaming server process to a system resource employed
for processing the request as a function of the level of service associated with the selected
content.
23. A method according to claim 22 wherein controlling access to a system resource includes
controlling access to a system resource selected from the group consisting of processor
time, system memory, disk access, network bandwidth, buffer space, and
24. A method according to claim 22 wherein controlling access includes selecting a priority
for a thread processing the stream of selected content.